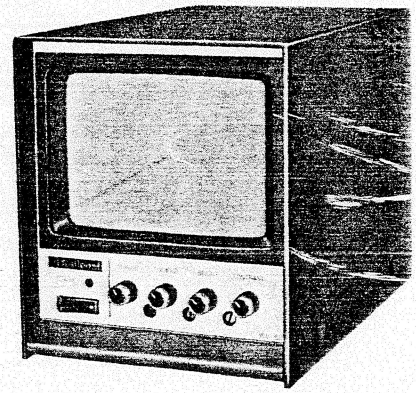
ORDER NO. AVD-7406-010

Service Manual

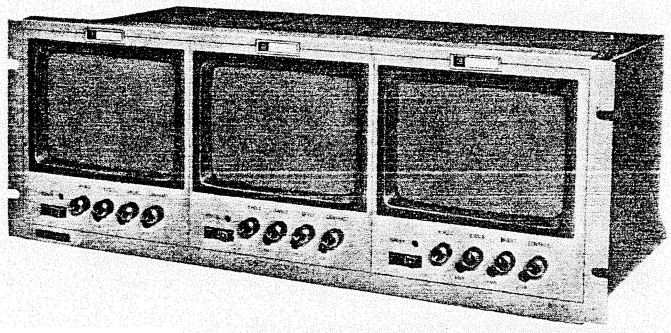
National

C.C.T.V.SYSTEM

National



WV-760



WV-763

VIDEO MONITOR

MODELS WV-760·WV-763

SPECIFICATIONS

Power Source:	AC Mains
Power Consumption:	WV-760; Approx. 27W WV-763; Approx. 81W
Video Input Impedance:	75Ω or High Impedance
Video Input Level:	0.5Vp-p~2.5Vp-p, Composite
Resolution:	More than 600 lines (at center)
Sweep Linearity:	Horizontal; Less than 5% Vertical; Less than 5%
High Tension:	DC 7kV
Horizontal Scanning Frequency:	15.75kHz
Vertical Scanning Frequency:	50Hz or 60Hz
External Sync:	2.0Vp-p~5.0Vp-p (Negative)
Semiconductors:	WV-760; 15 TRs, 1 IC, 13 diodes WV-763; 45 TRs, 3 ICs, 39 diodes
Picture Tube Used:	6" Diagonal 70° Deflection Type 150ACB4
Dimensions:	WV-760; 183mm(H) x 147mm(W) x 280mm(D) WV-763; 177mm(H) x 480mm(W) x 305mm(D)
Weight:	WV-760; Approx. 4.6 Kg WV-763; Approx. 16.7 Kg

CONTENTS

ADJUSTMENTS 1
METHOD OF DISASSEMBLY & EXPLODED VIEW 2
SCHEMATIC DIAGRAM 3
CONDUCTOR VIEW OF YWV760ZK01 4
REPLACEMENT PARTS LIST ..... 5 ~ 8

INTRODUCTION

The VIDEO MONITOR models WV-760 and WV-763 are fully transistorized and designed to be used for surveillance in C.C.T.V. system. The WV-760 and WV-763 employ a 6" picture tube with 70° deflection. Wide range of applications are assured in combination with C.C.T.V camera system.

MATSUSHITA ELECTRIC
MATSUSHITA ELECTRIC TRADING CO., LTD.
P. O. Box 288, Central Osaka, Japan

ADJUSTMENTS

■ REQUIRED TEST REQUIREMENTS:

- TV Camera or Cross Hatch Generator
- Coaxial Cable (Impedance: 75Ω)
- Standard Test Pattern
- Mirror
- Alignment Tools
- AC Voltmeter

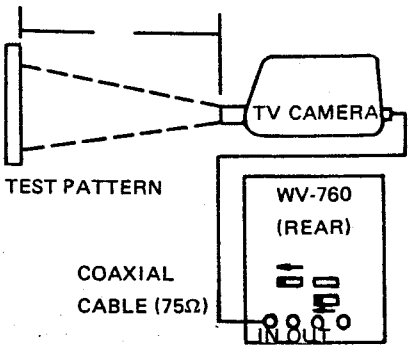


Fig. 1

■ NOTES

1) Position the test pattern distance from the TV camera and connect the coaxial cable between the TV camera and the VIDEO IN terminal of the video monitor as shown in Fig. 1.
2) TV camera and video monitor should be allowed to warm up before proceding with any adjustments.

1. Adjustment of Ver. SIZE and Ver. LIN

Adjustment Point:	Ver. SIZE and Ver. LIN
Test Point:	All Procedure on Video Monitor Screen

Adjust VR104 to obtain the full vertical size a little over-scanning and adjust VR103 for best vertical linearity.

2. Adjustment of Hor. SIZE and Hor. LIN

Adjustment Point:	Hor. SIZE (L102), Hor. LIN-1 (L104), Hor. LIN-2 (L103)

Adjust L102 to obtain the full Hor. size as a little over-scanning too and adjust L104 & L103 for best Hor. linearity.
NOTE: When the Hor. LIN adjustment can not be made with turnings, adjust an angle of Hor. COMP coil in the yoke.

3. Adjustment of Ver. HOLD

Adjustment Point:	Ver. HOLD (VR102)

Adjust VR102 for holding picture vertically.

4. Adjustment of Hor. HOLD

Adjustment Point:	Hor. HOLD (VR101), FREQ. (T401)

Adjust VR101 for holding picture horizontally.
NOTE: When the Hor. HOLD adjustment can not be made, take off the cover and then adjust a core of the T401 on the PCB (YWV760ZK01).

5. Adjustment of AFC

Adjustment Point:	Hor. BIAS (VR401)

1) Adjust T401 for holding picture.
2) Adjust VR401 on the PCB (YWV760ZK01), so that the Hor. holding is maintained by turning the VR101.

6. Adjustment of Centering

Adjustment Point:	Center Ring of Deflection Yoke

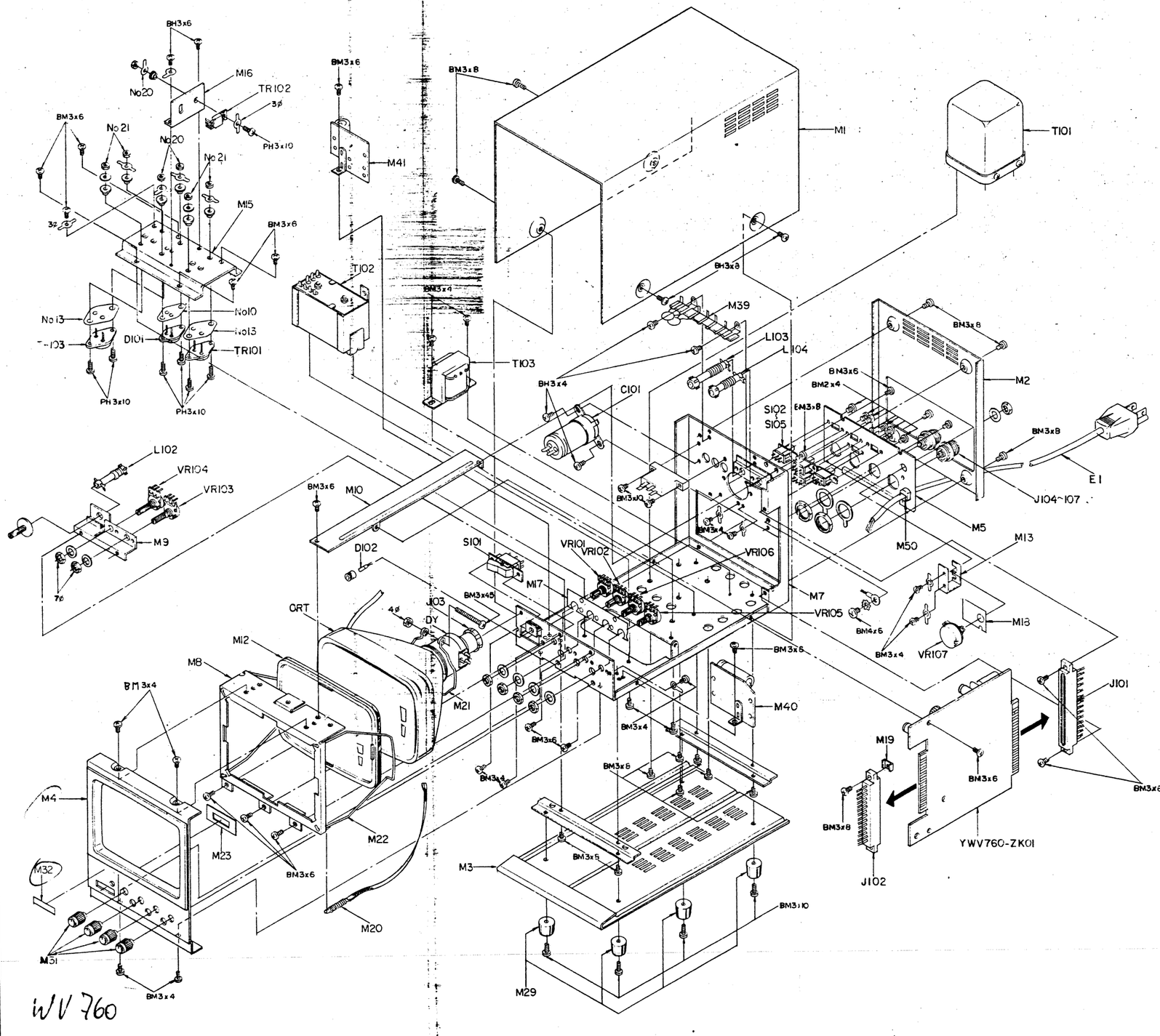
Turn the center ring of deflection yoke to correct picture position.

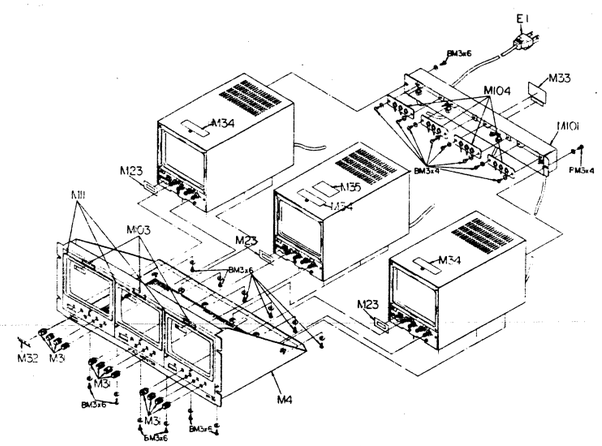
7. Adjustment of Focus

Adjustment Point:	Focus (VR107)

Adjust VR107 for sharpest picture.

METHOD OF DISASSEMBLY & EXPLODED VIEW

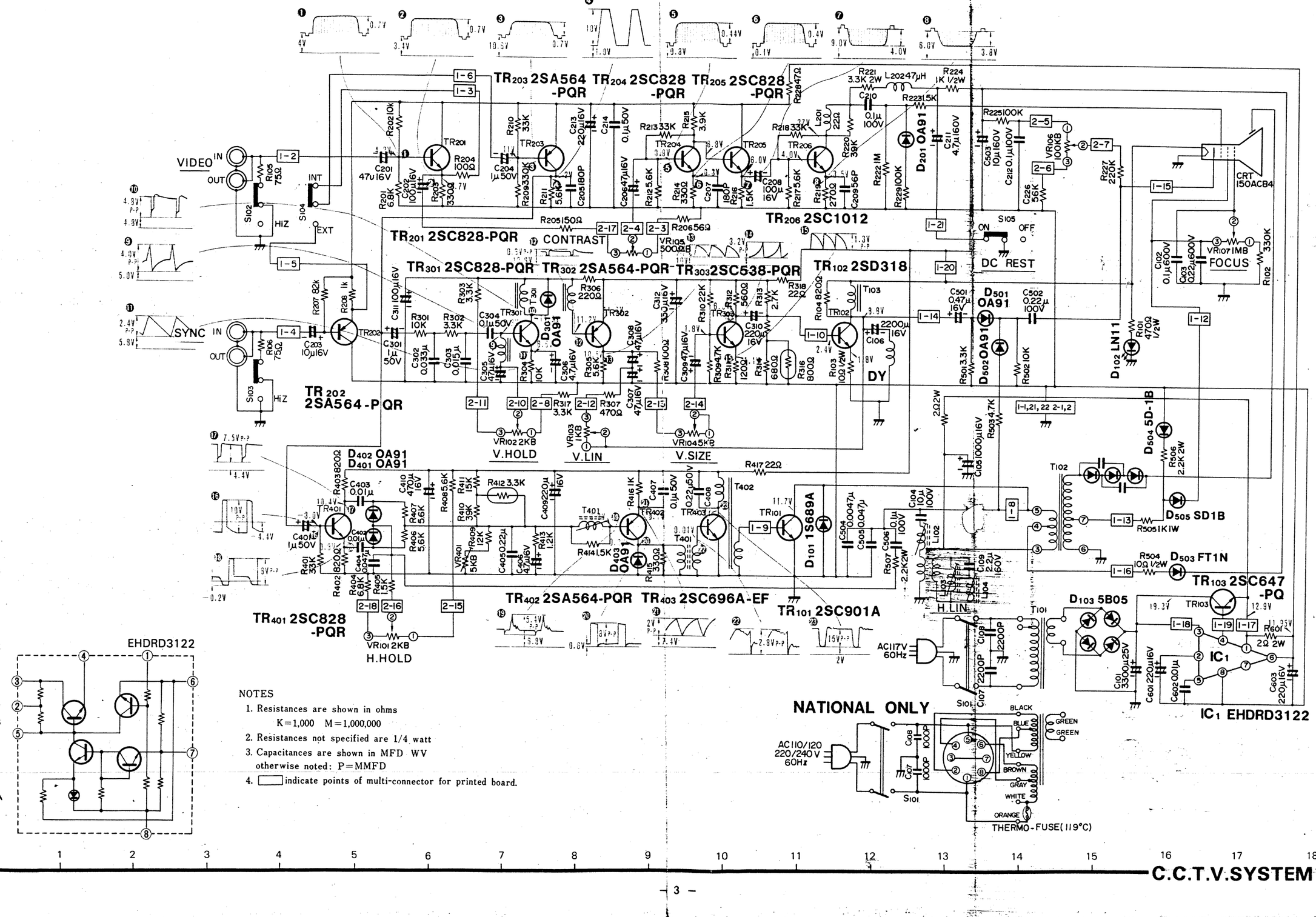




WV 760

C.C.T.V.SYSTEM

SCHEMATIC DIAGRAM MODELS WV-760 · WV-763



EHDRD3122

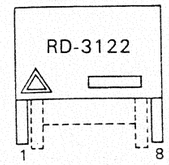
NOTES

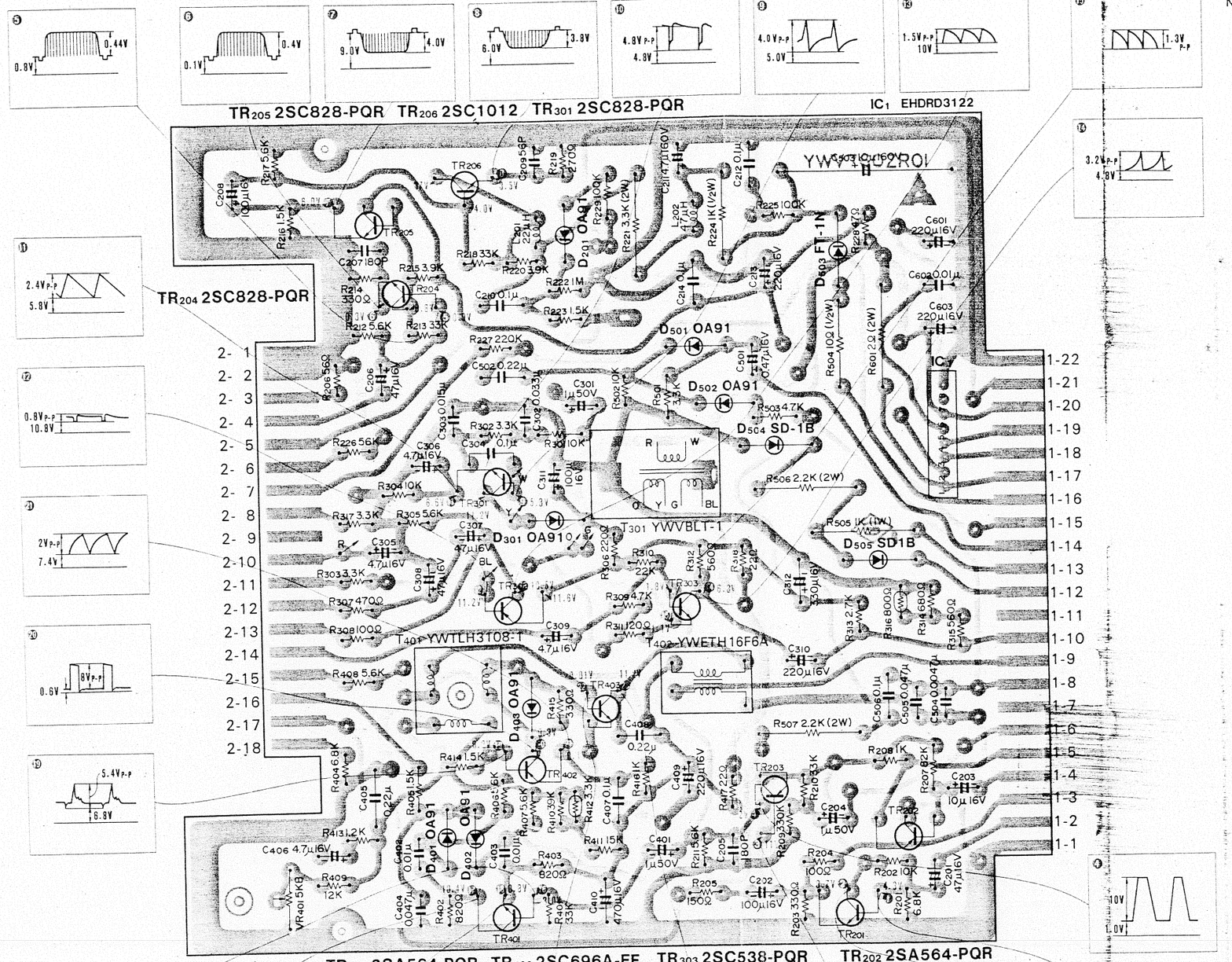
1. Resistances are shown in ohms
   K=1,000 M=1,000,000
2. Resistances not specified are 1/4 watt
3. Capacitances are shown in MFD WV otherwise noted: P=MMFD
4. ▭ indicate points of multi-connector for printed board.

CONDUCTOR VIEW OF YWV760ZK01

NOTE:Part number printed on PCB is only blank printed circuit board.

EHDRD3122





REPLACEMENT OF PARTS LIST

MODEL WV-760/763

SYM-BOL NO.	PART NO.	DESCRIPTION
	YWV760-ZK01	
E1	YWV760-ZK01	P.C.B. Ass'y
	TRANSISTORS	
TR201, 204, 205, 301, 401	2SC828-PQR	
TR202, 203, 302, 402	2SA564-PQR	
TR206	2SC1012	
TR303	2SC538-PQR	
TR403	2SC696A	
	IC	
IC1	EHDRD3122	
	DIODE	
D201, 301, 401, 402, 403, 501, 503	OA-90	
D503	YWFT1N	
D504, 505	YWSD-1B	
	CAPACITORS	
C201, 206, 309	ECEA16V47L	Electrolytic 47μF 16WV
C202, 268, 301	ECEA16V100L	Electrolytic 100μF 16WV
C203	ECEA16V10L	Electrolytic 10μF 16WV
C204, 301, 401	ECEA50V1L	Electrolytic 1μF 50WV
C205	ECQS1181KZ	Styrol 180pF 125WV
C207	ECQS1391KZ	Styrol 390pF 125WV
C209	ECCD1H560KC	Ceramic 560pF 50WV
C210, 506	YCQMS10104K	Polyester Film 0.1μF 100WV
C211	ECEA160V4R7	Electrolytic 4.7μF 160WV
C202	ECEA100V10L	Electrolytic 10μF 100WV
C213, 310, 409, 601, 603	ECEA16V220L	Electrolytic 220μF 16WV
C304, 402, 214	YCQMS05104K	Polyester Film 0.1μF 50WV
C302	YCQMS05333K	Polyester Film 0.033μF 50WV
C303	YCQMS05153K	Polyester Film 0.015μF 50WV
C305, 306, 406	ECSZ16EF4R7M	Electrolytic 4.7μF 16WV
C307, 308	ECEA16V47MH	Electrolytic 47μF 16WV
C312	ECEA16V330L	Electrolytic 330μF 16WV
C402, 403, 602	YCQMS05103K	Polyester Film 0.01μF 50WV
C404, 505	YCQMS05473K	Polyester Film 0.047μF 50WV
C405, 408	YCQMS05224K	Polyester Film 0.22μF 50WV
C410	ECEA16V470L	Electrolytic 470μF 16WV
C501	ECSZ16EFR47M	Electrolytic 0.47μF 16WV
C502	YCQMS10224K	Polyester Film 0.22μF 100WV
C503	ECEB160V10L	Electrolytic 10μF 160WV
C504 (N)	YCQMS05682K (YCQMS05472K)	Polyester Film 0.0068μF 50WV (Polyester Film) (0.0047μF)(50WV) NOT DETERMINED
	RESISTORS	
R201	ERD14VJ473	Carbon 47KΩ ±5% ¼W
R202, 226	ERD14VJ563	Carbon 56KΩ ±5% ¼W
R203, 314	ERD14VJ681	Carbon 680Ω ±5% ¼W
R204, 308, 311	ERD14VJ101	Carbon 100Ω ±5% ¼W
R205	ERD14VJ151	Carbon 150Ω ±5% ¼W
R206	ERD14VJ560	Carbon 56Ω ±5% ¼W
R207	ERD14VJ823	Carbon 82KΩ ±5% ¼W
R208, 416	ERD14VJ102	Carbon 1KΩ ±5% ¼W
R209	ERD14VJ334	Carbon 330KΩ ±5% ¼W
R210, 213, 218, 401	ERD14VJ333	Carbon 33KΩ ±5% ¼W
R211, 217, 305, 406, 407	ERD14VJ562	Carbon 5.6KΩ ±5% ¼W

SYMBOL NO.	PART NO.	DESCRIPTION
R212, 215, 220	ERD14VJ392	Carbon 3.9KΩ ±5% ¼W
R214, 306	ERD14VJ221	Carbon 220Ω ±5% ¼W
R216, 223, 405, 414	ERD14VJ152	Carbon 1.5KΩ ±5% ¼W
R219	ERD14VJ271	Carbon 270Ω ±5% ¼W
R221	ERG2ANJ332	Carbon 3.3KΩ ±5% 2W
R222	ERD14VJ105	Carbon 1MΩ ±5% ¼W
R224, 505	ERG1ANJ102	Carbon 1KΩ ±5% 1W
R225, 229	ERD14VJ104	Carbon 100KΩ ±5% 1W
R227	ERD14VJ224	Carbon 220KΩ ±5% 1W
R228	ERD14FJ470	Carbon 47Ω ±5% 1W
R301, 304, 502	ERD14VJ103	Carbon 10KΩ ±5% 1W
R302, 303, 317, 501	ERD14VJ332	Carbon 3.3KΩ ±5% 1W
R307	ERD14VJ471	Carbon 470Ω ±5% 1W
R309, 503	ERD14VJ472	Carbon 4.7KΩ ±5% 1W
R310	ERD14VJ223	Carbon 22KΩ ±5% 1W
R312, 315	ERD14VJ561	Carbon 560Ω ±5% 1W
R313, 404	ERD14VJ272	Carbon 2.7KΩ ±5% 1W
R318, 417	ERD14FJ220	Carbon 22Ω ±5% 1W
R402, 403	ERD14VJ821	Carbon 820Ω ±5% 1W
R408	ERD14VJ222	Carbon 2.2KΩ ±5% 1W
R409	ERD14VJ123	Carbon 12KΩ ±5% 1W
R410	ERD14VJ393	Carbon 39KΩ ±5% ¼W
R411	ERD14VJ153	Carbon 15KΩ ±5% ¼W
R413	ERD14VJ122	Carbon 1.2KΩ ±5% ¼W
R415	ERD14VJ331	Carbon 330Ω ±5% ¼W
R504	ERG1ANJ100	Carbon 10Ω ±5% 1W
R506, 507	ERG2ANJ222	Carbon 2.2KΩ ±5% 2W
R601	ERX2ANJ2R2	Carbon 2.2Ω ±5% 2W

COILS

L201	YWFL5H-220K	Peaking coil
L202	YWFL5H-470K	Peaking coil

SYMBOL NO.	PART NO.	DESCRIPTION

TRANSFORMERS

T301	YWVBLT-1	V. OSC Transformer
T401	YWTLH-3108-1	H. OSC Transformer
T402	YWETH16F6A	H. Drive Transformer

THERMISTORS

R316	ERTD2FKL801S	800Ω
R412	ERTD2FHL332S	3.3KΩ

CONTROLS

VR401	EVLS2AA00B53	5KΩB

MISCELLANEOUS

E101	YWMTC12AM15	Fasten Terminal

ELECTRIC PARTS

TRANSISTORS

TR101	2SC901A	Transistor
TR102	2SD318-0P	Transistor
TR103	2SC647-PQ	Transistor

DIODES

D101	YUD1S689A	Diode
D102	LN11	Diode
D103	YUD5B05	Diode

CAPACITORS

C101	ECEL25R3300E	Electrolytic	3300μF	25WV
C102	ECQM6104MZ	Polyester Film	0.1μF	600WV
C103	ECQM6224MZ	Polyester Film	0.22μF	600WV
C104	YW1MFT-P106	Paper	10μF	100WV
C105	ECEB16V1000L	Electrolytic	1000μF	16WV
C106	ECEB16V2200L	Electrolytic	2200μF	16WV
C107, 108	ECKDAL222PU	Ceramic	2200PF	
(N)	ECKDES102MD	Ceramic	1000pF	
C109	ECQM2225MZ	Polyester Film	2.2μF	200WV

SYM-BOL NO.	PART NO.	DESCRIPTION
RESISTORS		
R101	ERD12TJ471	Carbon 470Ω ±5% ½W
R102	ERD14TJ334	Carbon 330KΩ ±5% ¼W
R103	ERD12TJ100	Carbon 10Ω ±5% ½W
R104	ERD14TJ821	Carbon 820Ω ±5% ¼W
R105, 106	ERD14TJ750	Carbon 75Ω ±5% ¼W
R107	ERX2ANJ2R2	Carbon 2.2Ω ±5% 2W
CONTROLS		
VR102	EVHB0AK15B23	2KΩ
VR103	EVHB0AK20B13	1MΩ
VR104	EVHB0AK20B53	5KΩ
VR105	EVHB0AK15B52	500Ω
VR106	EVHB0AK15B15	100KΩ
VR107	EVCB0AS10B16	1MΩ
COILS		
L102	YWH1D-5	H. WID Coil
L103	YWHLIN-4	H. Linearity Coil
L104	YWHLIN-3	H. Linearity Coil
TRANSFORMERS		
T101	YWHPT-036	Power Transformer
(N)	YWHPT-038	Power Transformer —
T102	YWFS-30569	Flyback Transformer
T103	YWVCH-1	V. Output Choke
MISCELLANEOUS		
CRT	YUB150ACB4	C.R.T.
DY	YUYS-30457L	Deflecting Yoke
S101	YWPS60222V01	Power Switch
S102~5	YWX-J0410	Switch
J101	CR1B-22SA-4E	22P Multiple Connector
J102	CR1B—18SA-4E	18P Multiple Connector
J103	YWTVJ-105	C.R.T. Socket
J104~7	YWRB-2MI	Coaxial Connector
E1	YWKP30SVT320	Power Cord
E2	YW170048-2	Terminal
E3	YW1-480417-0	Housing
E4 (N)only	YWSEE09705	Voltage Selector

SYM-BOL NO.	PART NO.	DESCRIPTION
WV-760 MECHANICAL PARTS		
M1	YWV760PKM01	Cover
(N)	YWV760NKM01	Cover
M2	YWV760PKM02	Rear Cover
M3	YWV760PKM03	Bottom Cover
M4	YWV760PUM01	Front Panel
M5	YWV760PUM02	Connector Plate
M6	YWV760PLM01	Earth Plate
M7	YWVM202CM01A	Chassis
M8	YWVM202AM01	C.R.T. Angle
M9	YWVM202AM02	V.R. Angle
M10	YWVM202AM03	Plate
M11	YWV760PDR01	Escutcheon
M12	YWVM202DR01	CRT Mask
M13	YWVM202AM07	C.R. Earth Plate
M14	YWVM202LM02	6P Earth Plate
M15	YWVM202AM04	Heat Sink A
M16	YWVM202AM05	Heat Sink B
M17	YWVM202LB01	Insulating Plate A
M18	YWVM202LB02	Insulating Plate B
M19	YWVM202AM06	Key
M20	YWTCM20WM01	Spring
M21	YWV360PWM01A	C.R.T. Spring A
M22	YWV360PWM02B	C.R.T. Spring B
M23	YWV341PLB02	Power Switch Cover
M24	YWV340PHM01B	Grip
M25	YWV341PFR01	Grip Rubber
M26	YWV341PFR02	Grip Cushion
M27	YWV340PFM01	Grip Shaft
M28	YWV340PAM01	Grip Angle
M29	YWS-WB01	Rubber Foot
M30	YWSR5P4	Cord Bushing
M31	YWVM202HR01	Knob
M32	YWV388PUM04	Namer
(N)	YWV690NUM02	Namer
M33	YWV760PUM03A	Main Name Plate
(N)	YWV760NUM01	Main Name Plate
M34	YWS-RB019	X-ray Label
M35	YWV200PUB10	Caution Label (Large)
M36	YWV350PLB02	Caution Label
M37	YWV808OUB01	Caution Label
M38	YWV240PUB01C	S.E.R. No Label
M39	YWV202ER01	5P Terminal Board
M40	YWVM202ER02	Terminal Board A
M41	YWVM202ER03	Terminal Board B
M42 (N)only	YWV760NUM02	Voltage Caution Label
WV-763 MECHANICAL PARTS		
M1	YWV763PKM01	Cover
M4	YWV763PUM01A	Front Panel
M5	YWV763PUM02	Connector Plate

MODEL WV-760/763

SYM-BOL NO.	PART NO.	DESCRIPTION
M33	YWV763PUM03A	Main Name Plate
(N)	YWV760NUM03A	Main Name Plate
M101	YWV763PKM02	Power Box
M102	YWV763PLM01	Shielding Plate
M103	YWV763PDR01	Card Holder
M104	YWV763PER01	Power Terminal Board

PRINTED IN JAPAN
B-76 Ⓝ